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विद्युत मंत्रालय/Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली परियोजना प्रबोधन प्रभाग

Power System Project Monitoring Division

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ISO. : 9001-2008

F. No. CEA /PS/PSPM/07/07/2016/ 1257-1277.

Dated: 18.08.2016

19.

To,

(As per attached list)

Subject: Minutes of meeting taken by Chief Engineer(PSPM), CEA on 27.7.2016 to review the progress of transmission projects awarded through tariff based competitive bidding route

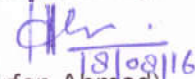
Sir,

Minutes of meeting taken by Chief Engineer(PSPM), CEA on 27.7.2016 to review the progress of transmission projects awarded through tariff based competitive bidding route is enclosed at annexure for information and necessary action.

This issues with the approval of Chief Engineer(PSPM), CEA.

Encl: as above.

Yours Sincerely,



(Irfan Ahmad)

Director(PSPM)

7/c

Issued
19/8/16

Copy forwarded for information to:

1. Joint Secretary (Trans.), MOP, Shram Shakti Bhawan, Rafi Marg, New Delhi
2. Chief Engineer(EI), CEA
3. Chief Engineer(SETD), CEA
4. PPS to Chairperson/Member(PS), CEA

Minutes of meeting taken by Chief Engineer(PSPM), CEA on 27.7.2016 to review the progress of transmission projects awarded through tariff based competitive bidding route

List of participant is attached at Annexure-I

2. Chief Engineer(PSPM) CEA welcomed participants. After brief introduction, CE(PSPM) informed that this meeting has been called to review the progress of transmission projects awarded through tariff based competitive route and also to discuss the issues of transmission projects awarded to M/s Adani and M/s Sterlite Grid as decided in last review meeting held on 17.06.2016 and invited M/s Adani transmission Ltd and M/s Sterlite Grid representative for discussion of their issues.

3. M/s Adani transmission Ltd representative informed as under;

(i) Issue of Power Line crossing of PGCIL line by STL, RRWTL and CWRTL (subsidiary of ATL) using D type tower only.

- M/s Adani representative informed that **PGCIL is specifying that while crossing their lines “D” type towers are must on both sides, whereas there is no such requirement in either electricity rules or any standards.** Moreover, PGCIL in their proposal to cross Adani’s Mundra - Mahindragarh HVDC line in case of PGCIL’s Bhuj - Banaskantha line have proposed “D” type tower on one side where as “B” type on the other side. Further PGCIL in their TBCB projects namely Vemagiri and Nagapattnam also allowed “D” type tower on one side and any angle tower on the other side depending upon the crossing angle. Hence it is suggested that power line crossing may be allowed with one side “D” type tower and other side with any angle tower with adequate margin in deviation angle.
- Representative from M/s Sterlite Grid also opined that it is not essential to use “D” type tower on both sides as per any technical standards.
- Chief Engineer(EI), CEA informed that as per electricity rules, there is no mandate that power line crossings have to be done with “D” towers on both the sides, however there has to be sufficient margin in the crossing towers depending on the angle of crossing. He further mentioned that while addressing the issue, the security of the grid should be the prime focus.
- PGCIL representative mentioned that their management have now taken a view that any power line crossing has to be done with “D” type tower on both sides to avoid any kind of disruption of power due to mis-happening during stringing over their line and subsequently to minimise the probability of snapping of their line due to tower collapse of the other utility.
- Chief Engineer(SETD), CEA stated that in case of railway line crossing, Railways insist crossing to be done by DD type only. As 765 kV or 400 kV(Quad) transmission lines of carries more than 2000 MW power, crossing of these voltage class lines should be done only by DD type tower (dead end tower with 60 degree angle of deviation) considering loss of power in case of failure of tower.
- Representatives of M/s Adani, M/s Essel infra and M/s Sterlite grid were of the view that above issues of PGCIL can be very well handled by completing the

stringing work over the power line crossing in continuity to the adjacent span and keeping adequate margin in the angle towers. Hence “D” type tower is not essential on both sides.

- It was finally decided that Chief Engineer(EI), CEA would call another meeting at CEA shortly inviting representatives of PGCIL, Adani, Sterlite, Essel and state transmission utilities to discuss and standardise the requirement so that the same can be included in the electricity rules which is undergoing an amendment at present.

(ii) Issue of bay allocation at Warora, Bilaspur and Gwalior S/S of PGCIL:

Bay position at Bilaspur S/S:

- M/s Adani Transmission Limited representative informed that as per the BPC line survey document, the bay position was indicated towards South side for termination of line at Bilaspur substation of PGCIL. However, PGCIL have allocated the bay position in North – East side. There is completely change in the orientation. Also, if ATL opt this route, the line will be crossed 2 M/C + 1 D/C line in single span. To avoid this, ATL requested PGCIL to allocate the available bay position in South or North – West side.
- As regards bay allocation at Bilaspur Substation of PGCIL for termination of Adani’s Sipat-Bilaspur line, PGCIL reiterated that allocating the vacant bay towards North – West side of substation as being mentioned by Adani shall result in loading of generation on one side of the bus and their future program of splitting the bus shall not be feasible.
- Adani representatives opined that there is physically no space available to split the bay and install bus sectionalise. Moreover, this substation is mainly catering to power injection from Sipat TPS and hence once the Sipat-Bilaspur line is connected the load on other bays shall come down. Therefore, there is no technical constraint in allocating the said bay.
- Chief Engineer(PSPM), CEA informed that since bay position is relocated from South to North side, it may impact in increase of line length. If PGCIL will not allocate the bay position in North – West side, it will further increase the line length and ultimately increase in project cost. Hence, Chief Engineer(PSPM), CEA directed PGCIL to reconsider the proposal and take a decision quickly.

Bay position at Warora S/S:

- As regards bay allocation at Worora substation of PGCIL for termination of Rajnandgaon-Warora line of Adani, PGCIL mentioned that the bay has already been identified. It was agreed by PGCIL to officially communicate the same to the Adani at the earliest.

Bay position at Gwalior S/S:

- As regards the bay allocation at Gwalior substation of PGCIL for termination of Gwalior-Morena line of Adani, PGCIL mentioned that due to paucity of corridor availability for future requirements, it is suggested that the dead end tower need to be a Multi-circuit tower, where the cost can be shared by PGCIL. CEA advised PGCIL to hold a bilateral meeting and finalise the modalities of cost sharing and other issues with Adani.

(iii) Issue of bay allocation at Chandwa and Gaya S/S of PGCIL and North Karanpura TPS switchyard of NTPC for transmission line being implemented by M/s NKTL (ATL)

- As regards Bay allocation at Chandwa and Gaya substations of PGCIL for termination of Adani's lines under North Karanpura project, Adani representative mentioned that CTU have already been requested on 14th June, 2016 with a reminder on 4th July, 2016, but till date the location of the bays have not been intimated to them.

Since the end date for North Karanpura -Chandwa line is fixed as Sept 2017, bay location needs to be finalised immediately so that the detail survey work can be completed. CEA directed PGCIL to immediately intimate Adani on the exact location of the bays looking at the compressed implementation schedule.

- As regards the bay allocation by NTPC at their North Karanpura Plant switchyard, for termination of Adani's lines under North Karanpura project, NTPC representative mentioned that the same have been intimated to Adani.

4. M/s Sterlite Grid representative informed as under;

(i) Maheshwaram Transmission limited (A subsidiary of Sterlite Grid) have to construct 400 kV bays at Shankapally s/s and Mehboobnagar S/s of TSTRANSCO for termination of Maheshwaram – Mehboobnagar and Nizamabad – Shankarpalli 400 kV lines awarded through TBCB in July 2015 and TSTRANSCO has made following observations;

- "TSTRANSCO will depute their inspector for inspection of materials & no material shall be dispatched from its point of manufacture before it has been satisfactory inspected, tested & cleared for dispatched by TSTRANSCO".
- TSTRANSCO is insisting for "third party NABL laboratory testing of energy meter, metering CT & PT for ratio test & phase angle error test before TS TRANSCO".
- TSTRANSCO stating that "Works mentioned in the scheme approval letter shall be deemed to be the property of the TSTRANSCO after take over. TS TRANSCO can utilize the above works in any manner as required from time to time".
- TSTRANSCO will intimate the location of interface meters (Main, Check & Standby) & MTL have to adhere to that.
- TSTRANSCO is insisting to establish SCADA along with necessary communication system to communicate with ALDC / SLDC.

M/s MTL (sterlite grid) representative stated that TSTRANSCO specified clauses are not stipulated in the RFP and TSA of this project. Hence it can't be a binding on M/s MTL. It was also apprehended that it would delay the project progress and informed that MTL being a developer of this asset, they will proceed as per their best practice and intimate the same to TSTRANSCO time to time.

Chief Engineer(PSPM), CEA advised representative of M/s MTL to proceed as per the clauses stipulated in respective TSA/RFP.

(ii) Representative of RAPP Transmission Company Ltd (A subsidiary of Sterlite Grid) stated that as indicated in TSA they have completed termination of OPGW at Shujalpur gantry and RAPP gantry and termination of OPGW in a joint box at both end. Further laying of approach cable from joint box at dead end tower to FODP is not in their scope of work. PGCIL representative informed that this work is under their scope at both the substation.

1. Chief Engineer(PSPM), CEA review the progress of balance transmission projects and project authority submitted progress as under;

(i) Eastern Region system strengthening Scheme – VI by DMTCL(Essel)

M/s DMTCL submitted the progress of line as under:

A. Muzaffarpur (PGCIL)-Darbhanga 400 kV D/C line

Line Length:	126 ckm
Tower Locations:	178 Nos
Foundations completed:	178 Nos
Towers erected:	175 Nos
Stringing completed:	110 ckm
Scheduled date of completion:	June, 2016
Expected date of completion :	Oct, 2016

It was further informed that construction work was basically affected due to the following key reasons:

- a) Forest Stage II approval received recently on 22nd July, 2016, which affected the work in forest stretches.
- b) High density of trees in the line route affecting the construction work as lot of public resistance is being faced at site.
- c) RoW at following locations/stretches is severely affecting the construction work:

SN.	Location/ Stretch Details	Block	District	RoW Nature
1	5/0	Kurhani	Muzaffarpur	Erection
2	4/0 - 6/0 (01 Km. affected stringing)	Kurhani	Muzaffarpur	Stringing
3	44/0	Bahadurpur	Darbhanga	Erection

- d) Due to prohibition on sand mining in Bihar in Feb 2016, construction was affected.
- e) Change in Gantry Co-ordinates at PGCIL Muzaffarpur S/S has involved crossing of 2 Nos. additional 400 kV D/C lines. The same involved design & supply of gantries. The same has affected the project completion schedule.

B) LILO of Barh-Gorakhpur 400 kV D/C line at Motihari

Line Length :	152 ckm
Tower Locations:	210 Nos
Foundations completed:	207 Nos

Towers erected: 197 Nos
Stringing completed: 108 ckm
Scheduled date of completion: Aug, 2016
Expected date of completion: Oct, 2016

It was further informed that construction work was basically affected due to the following key reasons;

- a) Forest approval is pending at Nodal Officer, Patna. Due to non-receipt of forest approval, as on date 12 Km. of stringing stretches are affected.
- b) Railway crossing approval is pending since May 2015.
- c) RoW at following locations/stretchers is severely affecting the construction work:

SN.	Location No.	Block	District	RoW Nature
Motihari CKT- I				
1	14/3	Majha	Gopalganj	Foundation
2	1/0	Barharia	Siwan	Erection
3	8/1	Barharia	Siwan	Erection
4	9/0	Barharia	Siwan	Erection
5	15/0	Majha	Gopalganj	Erection
Motihari CKT- II				
1	10/1	Barharia	Siwan	Erection
2	10/2	Barharia	Siwan	Erection
3	11/1	Barharia	Siwan	Erection
4	16/0	Majha	Gopalganj	Foundation
5	17/0	Majha	Gopalganj	Foundation

- d) Due to prohibition on sand mining in Bihar in Feb 2016, construction was affected.
- e) The construction work was affected due to unprecedented flood in Gandak River during May to July 2015.

DMTCL requested CEA to resolve row issues.

C) 2x500 MVA, 400/220 kV GIS at Darbhanga

Land Acquired: 100%
Civil work completed : 75%
Material received : 75%
Equipment erected : 30%
Schedule date of completion : June, 2016
Expected date of completion : Oct, 2016

Representative of DMTCL informed that foundation for 400 kV and 220 kV GIS building, control room, towers, Transformer, reactor have been completed. Transformers and GIS material has already received at site. Transformers have already been placed at plinth and erection of accessories is going on. It was informed that civil work was affected upto some extent due to the prohibition on sand mining in State Bihar in Feb 2016.

D) 2x200 MVA, 400/132 kV GIS substation at Motihari

Land Acquired:	100%
Civil work completed :	55%
Material received :	35%
Equipment erected :	20%
Schedule date of completion :	Aug, 2016
Expected date of completion :	Nov, 2016

Representative of DMTCL informed that foundation work of transformers, Reactors, GIS Buildings have been completed. For Control Room, 1st Floor roof slab is casted. The 400 kV GIS is under dispatch and 132 kV GIS equipment has already received at port. 2 Nos. Transformers and 3 Nos. Reactors are placed at plinth and erection of accessories is going on.

It was further informed that construction work was delayed basically due to the following reasons;

- a) Due to flooding at Motihari sub-station land in Aug/Sep 2015, the construction work was totally stopped during this period.
- b) Due to Geotechnical surprise at Sub-station land, ground improvement was required to be done before start of construction work for safety of foundations. Accordingly, ground improvement was done and same has taken additionally 04-05 months' time.
- c) Due to prohibition on sand mining in Bihar in Feb 2016, construction pace was affected.

(ii) **Northern Region System Strengthening scheme, NRSS-XXXI (Part B) by M/S Essel Infraprojects Ltd.**

M/s NRSS-31(B) submitted the progress of line as under:

(A) Kurukshetra - Malerkotla 400kV D/C line

Line Length:	267 ckm
Tower Locations:	375 Nos
Foundations completed:	65 Nos
Towers erected:	316 Nos
Stringing completed:	170 ckm
Scheduled date of completion:	Sept 2016

Regarding Transmission line project progress, it was informed that construction work was basically affected due to the following key reasons;

- a) **Forest Approval:** For Punjab portion, Stage I proposal is under approval at RMOEF, Chandigarh since May 2016. Approval is withheld due to NGT order dated 19th May 2016. Next hearing of NGT is scheduled on 5th Aug 2016. The same is affecting as on date 28 Km. of stringing stretches.
- b) **RoW issue:** RoW at following locations/stretchers is severely affecting the construction work:

SN.	Location No.	Tehsil/Block	District	RoW Nature	Remarks
1	3/1	Indri	Karnal	Foundation	
2	6/13	Thanesar	Kurukshetra	Erection	Case in Distt. Court Kurukshetra from 28 th Jan-16 & next scheduled date of hearing is 04 th Aug-16.
3	18/7	Pehowa	Kurukshetra	Foundation	
4	37/0	Samana	Patiala	Erection	
5	38/0	Samana	Patiala	Erection	
6	39/1	Samana	Patiala	Foundation	
7	39/2	Samana	Patiala	Foundation	
8	39/3	Samana	Patiala	Foundation	
9	44/0	Patiala	Patiala	Foundation	
10	66/0	Malerkotla	Sangrur	Foundation	
11	67/0	Malerkotla	Sangrur	Erection	
12	68/0	Malerkotla	Sangrur	Foundation	
13	68/1	Malerkotla	Sangrur	Foundation	
14	69/0	Malerkotla	Sangrur	Foundation	
15	42/0 - 44/0	Patiala	Patiala	Stringing	Affecting approximately stringing of 3.935 Km. We have also raised such issue before SDM (Patiala) vide our letter dated 20th July, 2017 in order to seek administrative support.

c) Shutdown un-availability for crossing EHV power lines.

NTL has requested the shutdown of various Interstate/Intrastate Transmission lines for crossing for approval in 123rd OCC meeting of Northern Region. However, no shutdown proposal was agreed out 5 nos. shutdown proposals.

Further, in 125th OCC meeting of Northern Region, out of 5 nos. shutdown proposals, only 1 no. is agreed. The details are as under:

SN.	Line details	Proposed outage schedule	Status
1	220 kV Kurukshetra - Panipat Line (Ckt I)	12th Aug 16	Dis-agreed
2	220 kV Dhulkote – Panipat Line (Ckt I&II)	12th Aug 16	Dis-agreed
3	220 kV Jamalpur – Sangrur Line (Ckt I&II)	29th Aug 16	Dis-agreed
4	400 kV Rajpura – Dhuri Line (Ckt I&II)	30th Aug 16	Dis-agreed
5	400 kV Rajpura – Bhiwani Line (Ckt I)	26th Aug 16	Agreed

(B) Malerkotla-Amritsar 400 kV D/C line

Line Length : 299 ckm
Tower Locations: 412 Nos
Foundations completed: 400 Nos
Towers erected: 371 Nos

Stringing completed : 176 ckm
 Scheduled date of completion: Sep 2016

Regarding Transmission line project progress, it was informed that construction work was basically affected due to the following key reasons;

- a) **Forest Approval:** Stage I proposal is under approval at RMOEF, Chandigarh since May 2016. Approval is withheld due to NGT order dated 19th May 2016. Next hearing of NGT is scheduled on 5th Aug 2016. The same is affecting 48 Km. of stringing stretches.
- b) **RoW issue:** RoW at following locations/stretchers is severely affecting the construction work:

SN.	Location No.	Tehsil/Block	District	RoW Nature	Remarks
1	18/0	Mullanpur	Ludhiana	Stringing	Land-owner issued notice through District Court (Ludhiana) in the RoW (Stringing) issue of Loc. No. 18/0. The matter is scheduled to be heard on 17th Sept, 2016.
2	19/0	Mullanpur	Ludhiana	Foundation	The Row matter at Location Nos. 19/0 and 20/0 is subjudice before Hon'ble High court of Punjab & Haryana since from 22/03/2016. Next scheduled date of hearing: For 20/0: 22nd Nov,16. For 19/0: 30th Aug,16
3	20/0	Mullanpur	Ludhiana	Foundation	
4	21/0	Mullanpur	Ludhiana	Foundation	
5	22/0	Mullanpur	Ludhiana	Foundation	
6	23/0	Mullanpur	Ludhiana	Foundation	
7	30/0	Gorahoor	Ludhiana	Foundation	

c) **Shutdown un-availability for crossing EHV power lines.**

NTL has requested the shutdown of various Interstate/Intrastate Transmission lines for crossing for approval in 123rd OCC meeting of Northern Region. However, no shutdown proposal was agreed out 4 nos. shutdown proposals.

Further, in 125th OCC meeting of Northern Region, out of 4 nos. shutdown proposals, only 3 nos. is agreed. The details are as under:

SN.	Line details	Proposed outage schedule	Status
1	400 kV Nakodar- Makhu Line (Ckt I,II)	01st Aug 16	Agreed
2	400 kV Patiala - Malerkotla Line (Ckt I)	04th Aug 16	Agreed
3	400 kV Talwandi- Sabo – Nakodar and Moga - Nakodar Line	24th Aug 16	Dis-agreed
4	400 kV Jalandhar- Moga Line (Ckt I,II)	29th Aug 16	Agreed

The delay is receipt of shutdown approvals will delay the completion of project.

d) Introduction of new 66 kV Tower Lines by PSPCL in Amritsar Transmission Line

PSPCL is converting some of its 66 kV Transmission Lines from Poles to Towers. The conversion from pole to tower line is being carried out even after completion of tower erection/ stringing of our Transmission line and without maintaining the required clearance as per IS. Such execution of work by PSPCL in an un-coordinated way has created hindrances in NTL line execution.

The details & status of these 66 kV Transmission lines are as below table:

Sl. No.	Location No. of NTL 400 kV Line	Status of PSPCL 66 kV Line	Status of NTL Line	Remarks
1	17/6 and 18/0	Stringing completed	Stringing completed	To maintain clearance, tower type at loc. 17/6 changed from DA+0 to DA+6.
2	38/0 and 38/1	Stringing completed	Stringing completed	To maintain clearance, tower type at loc. 38/0 changed from DC+0 to DC+9 and at loc. 38/1 from DA+0 to DA+9.
3	46/2 and 47/0	Stringing completed	Foundation completed. Tower erection at 46/2 completed.	Clearance issue.
4	57/6 and 57/7	Stringing completed	Stringing completed	PSPCL carried out the work after completion of NTL stringing and there is clearance problem.
5	78/1 and 78/2	Stringing completed	Foundation and Tower erection at Loc. 78/1 completed	To maintain clearance, tower type at loc. 78/2 changed from DA+3 to DA+9.

M/s NTL requested CEA to take up matter with PSPCL to resolve the issue.

(iii) Additional Inter regional AC link for import into Southern region i.e Warora-Warangal and Chilakaluripeta – Hyderabad – Kurnool 765 kV link- M/s WKTL(Essel Infra Ltd.)

The transmission project covers following works;

(A) Establishment of 765/400 kV substations at Warangal (New) with 2X1500 MVA transformers and 2X240 MVAR bus reactors.

765 kV bay requirement (in Warangal)

Line bays: 06 No.
Transformer bays: 02 No.
Space for future line bays: 06 No.

400 kV bay requirement (in Warangal)

Line bays: 02 No.
Transformer bays: 02 No.

Space for future line bays: 08 No.

- (B) Warora Pool – Warangal (New) 765 kV D/C line with 240 MVAR switchable line reactor at both ends
- (C) Warangal (New) – Hyderabad 765 kV D/C line with 240 MVAR switchable line reactor at Warangal end of each circuit.
- (D) Warangal (New) – Warangal (existing) 400 kV (quad) D/C line.
- (E) Hyderabad- Kurnool 765 kV D/C line with 240 MVAR switchable line reactor at Kurnool end of each circuit.
- (F) Warangal (New) – Chilakaluripeta 765 kV D/C line with 240 MVAR switchable line reactor at both ends of each circuit.
- (G) 240 MVAR Switchable Line Reactors with Bays at Warora Pool end in each circuit of Warora Pool- Rajnandgaon 765kV D/c line with NGR (700 Ohm)

M/s WKTL representative informed that SPV has been acquired in July, 2016 and they have applied for transmission license.

(iv) ATS for Tanda expansion TPS by TTCL(Essel infra Ltd.)

The transmission project covers following works;

- (A) Tanda - Sohwal 400 kV D/C Line – 172.946 ckm
- (B) Sohwal - Lucknow 400 kV D/C Line – 176.212 ckm

Representative from M/s Essel Infra informed that TSA is yet to be signed.

(v) System strengthening in Northern region (NRSS XXXVI) along with LILO of Sikar-Neemrana 400 kV D/C line at Babai (RVPNL) by NRSS XXXVI Transmission Company Limited (Essel infra Ltd.)

The transmission project covers following works;

- (A) Koteshwar P. S. - Rishikesh 400 kV D/C (HTLS) Line – 172.946 ckm
- (B) 2 Nos. of bays at 400/220 kV Rishikesh S/s
- (C) LILO of one ckt. Of Sikar(PG)-Neemrana(PG) line at Babai-2.922 Ckm
- (D) Babai (RRVPNL)-Bhiwani(PG) D/C line-248.61 Ckm
- (E) 4 nos. of bays at 400/220 kV Babai S/s (RRVPNL)

Representative from M/s Essel Infra informed that TSA is yet to be signed.

(vi) Connectivity lines for Maheshwaram 765/400 kV substation - M/s Maheshwaram Transmission Ltd (Sterlite Grid)

The transmission project covers following works and its progress is as under;

- (A) Maheshwaram(PG) – Mehboobnagar 400 kV D/C line alongwith 2 nos 400 kV line bays at Mehboobnagar S/s of TSTRANSCO

Line Length:

196 ckm

Tower Locations:	252 nos
Foundation completed:	62 nos
Tower erected:	0 nos
Stringing completed:	0 cKm
Scheduled date of completion:	2 nd April, 2018
Anticipated date of Completion:	Feb'2017

(B) Nizamabad-Yeddumailaram 400 kV D/C line alongwith 2 nos 400 kV line bays at Yeddumailaram(Shankarpalli)S/s of TSTRANSCO

Line Length:	277 ckm
Tower Locations:	355 nos
Foundation completed:	66 nos
Tower erected:	0 nos
Stringing completed:	0 cKm
Scheduled date of completion:	April, 2018
Anticipated date of Completion:	Feb'2017

(vii) Part ATS for RAPP U-7 & U-8 in Rajasthan by M/s RAPPTCL (Sterlite grid)

The representative from M/s RAPPTCL informed that RAPP-Shujalpur 400 kV D/C Transmission line work has been completed and 400 kV Bays at RAPP switchyard for termination of line is yet to be constructed by RAPP project authority.

(viii) Northern Region System Strengthening scheme- M/s NRSS-XXIX Transmission Limited (Sterlite Grid)

The transmission project covers following works and its progress is as under;

(A) Jullandhar-Samba 400kV D/C line:

Line Length:	270 ckm
Tower Locations:	356 Nos
Foundations completed:	356 Nos
Towers erected:	356 Nos
Stringing completed:	270 ckm
Scheduled date of completion:	05.08.2018

Line commissioned on June, 2016.

(B) Samba-Amargarh 400 kV D/C

Line Length:	574 ckm
Tower locations:	783 Nos.
Foundation completed:	490 Nos.
Tower erected:	242 Nos.
Stringing completed:	94 ckm
Scheduled date of completion:	05.08.2018
Expected date of completion:	Oct, 2017

Representative of Sterlite Grid informed that forest clearance in Wildlife is pending with J&K state Govt.

(C) 2x315 MVA 400/220 kV GIS at Amargarh

Land acquired	100% .
Civil work completed:	17%
Equipment supplied	0%
Equipment erection	0%
Scheduled date of completion:	05.08.2018
Expected date of completion:	Oct, 2017

Representative of Sterlite Grid informed that work of boundry wall has started.

(ix) Common Transmission system for phase-II generation projects in Orissa and immediate evacuation system for OPGC project – M/s OGPTL (Sterlite Grid)

The transmission project covers following works and its progress is as under;

(A) Jharsuguda – Raipur 765 kV D/C (hexa) line

Line Length:	644 ckm
Tower Locations:	763
Foundation completed:	234 nos
Tower erected:	7 nos
Stringing completed:	0 cKm
Scheduled COD:	July, 2017

(B) OPGC TPS– Jharsuguda 400 kV D/C (triple) line

Line Length:	110 ckm
Tower Locations:	
Foundation completed:	
Tower erected:	
Stringing completed:	
Scheduled completion:	July'2017

(x) Creation of new 400 kV GIS in Gurgaon area and Palwal as a part of ISTS - M/s GPTL(Sterlite Grid)

The transmission project covers following works and its progress is as under;

- a) Aligarh-Prithala 400 kV D/C HTLS line
- b) Prithala-Kadarpur 400 kV D/C HTLS line
- c) Kadarpur-Sohna road 400 kV D/C HTLS line
- d) LILO of Gurgaon – Manesar 400 kV D/C (Q) line at Sohna Road
- e) Neemrana(PG) – Dhanonda 400 kV D/C HTLS line
- f) 2x500 MVA, 400/220 kV GIS at Kadarpur (Gurgaon)
- g) 2x500 MVA, 400/220 kV GIS at Sohna Road (Gurgaon)
- h) 2x500 MVA, 400/220 kV GIS at Prithala(Palwal)

Representative from M/s GPTL (Sterlite Grid) informed that SPV acquired on 14.07.2016, work yet to start.

(xi) Eastern Region System Strengthening scheme-VII by M/s PKTCL (Sterlite Grid)

The transmission project covers following works and its progress is as under;

- (a) Purulia(WB) – Ranchi (PGCIL) 400kV D/C line

Line Length:	370 cKm
Tower Locations:	302 Nos
Foundations completed:	289 Nos
Towers erected:	266 Nos
Stringing completed:	112 cKm
Scheduled date of completion:	09.03.2016
Expected date of completion:	Sept, 2016

(b) Chaibasa- Kharagpur 400 kV D/C line

Line Length:	332 ckm
Tower Locations:	426 Nos
Foundations completed:	426 Nos
Towers erected:	426 Nos
Stringing completed:	332 ckm
Scheduled date of completion:	09.03.2016

Transmission Line work has been completed.

(xii) Additional system strengthening for Sipat STPS by M/s Sipat Transmission Ltd.(Adani Transmission Ltd)

The transmission project covers following works and its progress is as under;

(a) Sipat STPS - Bilaspur 765 kV D/C (Q) line

Length:	21 ckm
Locations:	62
Foundation completed:	21
Tower erected:	13
Stringing completed:	0 cKm
Anticipated completion	30.11.2017

(b) Bilaspur - Rajnandgaon 765 kV D/C (hexa) line

Length:	322 ckm
Locations:	419
Foundation completed:	193
Tower erected:	100
Stringing completed:	0 cKm
Anticipated completion	31.07.2018

(xiii) Additional system strengthening for Chhattisgarh (B) by M/s RRWTL (Adani Transmission Ltd)

The transmission project covers following works and its progress is as under;

(a) Raipur - Rajnandgaon 765 kV D/C (hexa) line

Length:	80 ckm
Locations:	105
Foundation completed:	81
Tower erected:	62
Stringing completed:	0 cKm
Anticipated completion	31.07.2018

(b) Rajnandgaon - Warora 765 kV D/C (hexa) line

Length:	532 ckm
Locations:	689
Foundation completed:	191
Tower erected:	102
Stringing completed:	0 cKm
Anticipated completion	31.07.2018

(c) 765 kV Rajnandgaon switching station

Land acquired:	100%
Civil works completed	5%
Equipment supplied	0%
Equipment erected	0%
Anticipated completion	31.08.2017

(xiv) System strengthening for IPPs in Chhattisgarh and other generation projects in western region by M/s CWRTL(Adani Transmission Ltd)

The transmission project covers following works and its progress is as under;

(A) 400 kV interconnection at Gwalior 765/400 kV s/s

(a) Gwalior - Morena 400 kV D/C (Q) line

Line Length:	98 ckm
Tower Locations:	152 nos
Foundation completed:	81nos
Tower erected:	26 nos
Stringing completed:	0 cKm
Anticipated completion	31.01.2018

(b) 2x315 MVA, 400/220 kV Morena substation

Land acquired:	100%
Civil works completed	0%
Equipment supplied	0%
Equipment erected	0%
Anticipated completion	30.04.2017

(B) Additional evacuation line from Vindhyachal-IV & V STPP (3x500 MW)

(a) Vindhyachal STPS - IV & V – Vindhyachal pool 400 kV D/C (Q) line

Line Length:	54 ckm
Tower Locations:	82 nos
Foundation completed:	39 nos
Tower erected:	0
Stringing completed:	0 cKm
Anticipated completion:	31.01.2018

(b) 400 kV bays (2 nos.) at Vindhyachal STPP switchyard

Land acquired:	0%
Civil works completed	0%
Equipment supplied	0%

Equipment erected 0%
Anticipated completion 30.04.2017

M/s APL representative informed that permission to start construction work at NTPC switchyard is awaited.

(C) Additional system strengthening scheme for Chhattisgarh IPP's (Pt-A)

(a) Sasan UMPP – Vindhyachal Pooling Station 765 kV S/C (Q) line

Line Length: 06 ckm
Tower Locations: 18 nos
Foundation completed: 4 nos
Tower erected: 0
Stringing completed: 0 cKm
Anticipated completion 31.01.2018

(b) Raigarh (Kotra) – Champa (Pool) 765 kV S/C (Q) line

Line Length: 94 ckm
Tower Locations: 247 nos
Foundation completed: 158 nos
Tower erected: 80 nos
Stringing completed: 0 cKm
Anticipated completion 31.01.2018

(c) Champa (Pool) – Dharamjaygarh 765 kV S/C (Q) line

Line Length: 49 ckm
Tower Locations: 143 nos
Foundation completed: 75 nos
Tower erected: 47 nos
Stringing completed: 0 cKm
Anticipated completion 31.01.2018

(d) LILO of one ckt of Aurangabad – Padghe 765 kV D/C line at Pune

Line Length: 128 ckm
Tower Locations: 169 nos
Foundation completed: 18 nos
Tower erected: 03 nos
Stringing completed: 0 cKm
Anticipated completion 31.05.2018

(e) 765 kV bays at Sasan UMPP

Land acquired: 0%
Civil works completed 0%
Equipment supplied 0%
Equipment erected 0%
Anticipated completion 30.04.2017

M/s APL representative informed that permission to start construction work at Sasan UMPP switchyard by Reliance Power is awaited.

(xv) Immediate evacuation for North Karanpura (3x660MW) generation project of NTPC(ERSS-XIX) by M/s NKTL (Adani Transmission Limited)

The transmission project has been awarded to M/s North Karanpura Transco Ltd (A subsidiary of Adani Transmission Ltd). The LOI was issued on 24.5.2016 and SPV was acquired on 8.7.2016. Project Authority is yet to apply for transmission license and tariff adoption to CERC.

(xvi) Transmission System associated with IPPs of Nagapattinam/Cuddalore Area -Package-A by PNMTL(PGCIL)

PGCIL submitted the progress of line as under:

(a) Nagapattinam Pooling Station – Salem 765 kV D/C line

Length:	400 ckm
Tower locations:	543 Nos.
Foundation completed:	535 Nos
Tower erected:	515 Nos.
Stringing completed:	324 Ckm
Schedule date of completion:	Dec, 2015
Expected date of completion:	Aug, 2016

Representative of PGCIL informed that the progress has been affected due to severe row issues and court cases. However, efforts are being put for completion of line by Aug, 2016.

(b) Salem – Madhugiri 765 kV S/C line

Length:	219 ckm
Tower locations:	575 Nos.
Foundation completed:	340 Nos.
Tower erected:	228 Nos.
Stringing completed:	35 ckm
Schedule date of completion:	Dec, 2015
Expected date of completion:	Dec, 2016

Representative of PGCIL informed that there is severe ROW in Karnataka portion of the line (about 130 kms) and also 1 tower locations are falling in wild life sanctuary, which was declared after commencement of work. PGCIL further stated that the proposal for approval is lying with Tamil Nadu Board of Wildlife, whose meeting has not been convened for long time. After clearance of State Wild Life Board, the proposal would go for approval of National Board for Wild life (NBWL).

(xvii)Transmission System associated with IPPs of Vemagiri Area – Package A by M/s Powergrid Vemagiri Transmission Ltd(PGCIL)

Representative of PGCIL informed that project has been scrapped as per the direction of CERC.

(xviii) Transmission system for system strengthening in SR for import of Power from ER by Powergrid Vizag Transmission Ltd(PGCIL)

PGCIL submitted the progress of line as under:

(a) Srikakulam PP – Vemagiri-II PS 765 kV D/C line

Length:	668 ckm
Tower locations:	877 Nos.
Foundation completed:	876 Nos
Tower erected:	864 Nos.
Stringing completed:	588 ckm
Schedule date of completion:	August, 2016
Expected date of completion:	August, 2016

Representative of PGCIL informed that Vemagiri –II pooling station would be completed matching with line.

(b) Khammam (existing) – Nagarjuna Sagar 400 kV D/C line

Transmission Line commissioned in December, 2015.

(xix) ATS of Unchahar TPS by M/s PUTL(PGCIL)

PGCIL submitted progress of Unchahar-Fatehpur 400 kV D/C line as under;

Line Length	106 Ckm
Tower Location	145 Nos.
Foundation Completed	143 Nos.
Tower erected	142 Nos.
Stringing Completed	100 Ckm
Schedule date of completion	Sept, 2016
Anticipated date of completion	Sept, 2016

The representative of POWERGRID informed that as decided in the last review meeting held in CEA on 17.6.2016, NTPC has cleared the site and construction of last foundation (dead end tower) is under construction and line is expected to complete by its schedule date i.e September 2016.

(xx) NR System Strengthening scheme - NRSS-XXXI (Part-A) by M/s PKATL (PGCIL)

PGCIL submitted progress of transmission works as under;

(a) 7x105 MVA, 400/220 kV GIS at Kala Amb

Land Acquisition:	100%
Civil Work Completed:	50%
Equipment Received:	2%
Erection completed:	0%
Schedule date of completion	July 2017
Expected date of completion	July 2017

PGCIL representative informed that Supply and Erection Packages awarded to Siemens in August 2014 and Civil works package awarded to M/s Kashyapi in December 2015. CE(PSPM), CEA enquired about slow progress of substation. PGCIL representative stated that due to snow bound area the working period is less compare to plan area, however PGCIL confirmed to complete substation by its scheduled date i.e 12.07.2017.

- (b) LILO of both circuit of 400 kV D/C Karcham Wangtoo - Abdullapur line at Kala Amb

Line Length:	2 km,
Tower Locations:	4 No
Foundation completed	Nil
Towers erected	Nil
Stringing completed	Nil
Schedule date of completion	July 2017
Expected date of completion	July 2017

PGCIL representatives informed that work has been awarded to M/s KEC. The length of LILO line is about 2 km and all 4 nos location fall in forest area. The proposal has been submitted and clearance would be received shortly.

(xxi) Transmission System associated with Gadawara STPS (2x800 MW) of NTPC (Part-A) by M/s PWTL(PGCIL)

PGCIL submitted the progress as under:

- (a) Gadawara STPS -Jabalpur pooling station 765 kV D/C line

Stage-1: 765 kV D/C LILO of Seoni-Bina at Gadawara

Line Length:	31ckm
Tower Locations:	43 No
Foundation completed:	43
Tower erected:	24
Stringing completed:	0
Scheduled date of completion:	Nov'2016

Stage-2 Dismantle the LILO and extend Line upto Jabalpur S/S,

Line Length:	175 ckm
Tower locations:	227 Nos.
Foundation completed:	46 Nos.
Tower erected:	06 Nos.
Stringing completed:	0 ckm
Scheduled date of completion:	May, 2017

- (b) Gadawara STPS- Warora P.S. (New) 765kV D/C line

Line Length:	638 ckm
Tower Locations:	871 Nos
Foundation completed:	101 Nos.
Tower erected:	16 Nos.
Stringing completed:	0 ckm
Scheduled date of completion:	Nov, 2017

PGCIL representative informed that construction work was awarded to M/s Simplex in Dec, 2015. PGCIL was advised to expedite construction work as progress is very slow.

- (c) LILO of both ckt of Wardha – Parli at Warora (New) PS.

Line Length:	186 ckm
Tower Locations:	246 Nos.
Foundation completed:	8 Nos.

Tower erected:	0 Nos.
Stringing completed:	0 ckm
Scheduled date of completion:	Nov, 2017

PGCIL representative informed that construction work was awarded to M/s Gammon in Jan, 2016 and submitted proposal for route approval u/s 164 in May, 2016. CE(PSPM) advised PGCIL to expedite u/s 164 approval at the earliest.

(d) 2x1500 MVA, 765/400 kV Warora (New) Pooling Station

PGCIL representative informed that Land registry for substation has commenced and registry of 57 acre out of 103 Acre completed, balance is under progress. Substation Supply and Erection Package has been awarded to M/s Siemens in Sep'15 and engineering is complete. CE(PSPM) advised PGCIL to expedite the construction of substation to Complete sub-station by Nov'2017.

(xxii)Transmission System associated with Gadarwara STPS (2x800 MW) of NTPC (Part-B) by M/s PPTL(PGCIL)

PGCIL submitted the progress as under:

(a) Warora PS – Parli (New) 765 kV D/C line

Line Length:	236 km
Tower Locations:	950 Nos.
Foundation completed:	47 Nos.
Tower erected:	0 Nos.
Stringing completed:	0 ckm
Scheduled date of completion:	Jan, 2018

(b) Parli (New) – Solapur 765 D/C line

Line Length:	236 ckm
Tower Locations:	309 Nos
Foundation completed:	30 Nos.
Tower erected:	0 Nos.
Stringing completed:	0 ckm
Scheduled date of completion:	Jan, 2018

(c) Parli (New) – Parli (PG) 400 kV D/C line

Line Length:	36 ckm
Tower Locations:	52 Nos.
Foundation completed:	3 Nos.
Tower erected:	0 Nos.
Stringing completed:	0 ckm
Scheduled date of completion:	Jan, 2018

PGCIL representative informed that work awarded to M/s L&T and M/s Bajaj on Feb' 16 and confirm that lines would be completed as per schedule.

(d) 2x1500MVA, 765/400 kV Parli (New) substation

PGCIL representative informed that Distt Collector, Parli has ordered for acquisition of land for substation and confirmed that land would be acquired by PGCIL within 15 days.

(xxiii) Transmission system strengthening associated with Vindhyachal- V by M/s PJTL(PGCIL)

PGCIL submitted the progress as under:

(a) Vindhyachal P.S - Jabalpur P.S. 765 kV D/C line

Line Length:	760 ckm
Tower Location:	1036 Nos
Foundation completed:	102 Nos.
Tower erected:	0 Nos.
Stringing completed:	0 ckm
Scheduled date of completion:	June, 2018

PGCIL representative informed that work awarded to M/s Tata and M/ KEC in March, 2015 and confirmed that line would be completed as per schedule.

(xxiv) Transmission system associated with beyond Vemagiri by M/s PSITSL (PGCIL)

PGCIL submitted the progress as under:

(a) Vemagiri - Chilakaluripeta 765kV D/C Line

Procurement activities initiated, Award placed in Mar'16 to M/s. KPTL.

Tower packages awarded

Line Length:	250 Kms. Approx.
Tower Locations:	660
Foundation completed	09
Towers erected	0
Schedule date of completion:	Apr'19

(b) Chilakaluripeta - Cudappah 765kV D/C Line

Award placed in Mar'16 to M/s. KEC, Tower packages awarded

Line Length:	303 Kms. Approx.
Tower Locations:	760
Foundation completed	12
Towers erected	0
Schedule date of completion:	Apr'19

(c) Cudappah - Madhugiri 400 kV D/C (Quad Moose) Line

Award placed in Mar'16 to M/s. L&T, Tower packages awarded

Line Length:	238 Kms. Approx.
Tower Locations:	616
Foundation completed	Nil
Towers erected	Nil
Schedule date of completion:	Apr'19

(d) Srikakulam - Garividi 400 kV (Quad Moose) D/C Line

Award placed in Mar'16 to M/s. Tata, Tower packages awarded.

Line Length:	143 Kms. Approx.
Tower Locations:	391
Foundation completed	02

Towers erected Nil
Schedule date of completion: Feb'19

(e) Chilkaluraipeta - Narasaraopeta 400 kV (Quad Moose) D/C Line
Award placed in Mar'16, Tower packages awarded.

Line Length: 42 Kms. Approx.

Tower Locations: 119 nos

Foundation completed 0

Towers erected 0

Schedule date of completion: Feb'19

(f) 765/400kV Chilakularipeta Substation

Award under progress

Schedule date of completion: Apr'19

PGCIL representative informed that 90 acre pvt. land for Chilkaluraipeta S/S has been identified. Meetings convened at the level of Hon'ble Speaker, Joint Collector, Guntur with landowners. Joint Collector, Guntur has notified Social Impact Assessment committee constitution. Hon'ble Speaker has also briefed the land owners about the suitability of the land and Government's intent to acquire this land for the project.

(g) Satenapalli (Narasaraopeta) 400 kV Substation extension

Award under progress

Schedule date of completion: Apr'19

(h) Garividi 400 kV Substation extension

Award under progress

Schedule date of completion: Feb'19

(xxv) Transmission System required for evacuation of Power from Kudgi TPS (3x800 MW in Phase-I) of NTPC Ltd by M/s KTCL(L&T).

No representative of KTCL attended the meeting.

(xxvi) Transmission system associated with DGEN TPS(1200 MW) of Torrent Power Ltd. by M/s DGEN Transmission Company Ltd.(Instalaciones Inabensa SA Spain)

No representative from M/s DGEN Transmission Company Ltd attended the meeting. It was noted that project authority is yet to start construction of both line. The schedule date of completion of transmission project is May, 2018. Chief Engineer(PSPM) instructed to call project authority for meeting.

(xxvii) Transmission system strengthening in Indian system for transfer of power from new HEP's in Butan-by M/s Alipurduar Transmission Ltd.(A subsidiary of Kalptaru Power Transmission Ltd.)

The transmission projects covers following transmission lines as under-

(a) Alipurduar (PG) – Siliguri (PG) 400 KV D/C line-234 Ckm

(b) Kishanganj (PG) – Darbhanga (DMTCL) 400 KV D/C line-420 Ckm

M/s ATL representative informed that SPV has been acquired in Jan2016 and gazette notification done in April2016 as there was some discrepancies so corrigendum issued in Jun2016. The approval u/s 164 would be received soon. The scheduled date of completion for the scheme is March,2019.

(xxviii) Transmission System for Patran 400kV S/S – by M/s PTCL(Techno electric)

No representative from M/s PTCL attended the meeting. It was noted that project authority has completed 400 kV LILLO line and 400/220 kV substation in Jun,2016.

The meeting ended with thanks to the chair.

List of Participants

CEA

1. Shri B K Arya	Chief Engineer (PSPM)
2. Shri S K Ray Mohapatra	Chief Engineer (PSE&TD)
3. Shri Goutam Ray	Chief Engineer (CEI)
4. Shri Irfan Ahmad	Director(PSPM)
5. Shri R K Tiwari	Dy. Director (PSPM)
6. Shri Farooque Iqbal	Dy. Director (PSPM)
7. Shri Narsi Ram Meena	Dy. Director (PSPM)
8. Shri C. N. Devrajan	Dy. Director(PSE&TD)
9. Smt Kavita Jha	Dy. Director(PSE&TD)
10. Shri Rajesh	Asst. Director (PSPM)
11. Shri Ravi Kant	Asst. Director (PSPM)

PGCIL

1. Shri Vibhay Kumar	AGM
2. Shri P R PATI	AGM
3. Ms. Poonam Varshney	AGM
4. Shri A K Viash	Consultant

NTPC LTD.

1. Shri Suveen Vyas	DGM(PP&M)
2. Shri Anand Mohan Gupta	Sr. Manager (Proj. P&M)

ADANI TRANSMISSION LTD.

1. Shri L N Mishra	Sr. V.P.
2. Shri Bipin B. Shah	Sr. V.P.
3. Shri Jigar Thakkar	AGM
4. Shri Yogesh Agarwal	Advisor

KPTL

1. Shri Soumen Sinha	AGM
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PFCCL

1. Shri Sanzay Nayak	AVP
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RECTPCL

1. Shri Vivek Agarwal	Manager
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ESSEL INFRAPROJECTS

1. Shri Amit Kumar	GM
2. Shri Neeraj Verma	Manager

STERLITE GRID

1. Shri TAN Reddy	V.P.
2. Shri Bigyan Panja	AVP
3. Shri S G Mohanty	AVP
4. Shri Sandip Maity	Chief Manager

List of Addressees

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2	Chairman & Managing Director, POWERGRID Saudamini, Plot No.2, Sector 29, Near IFFCO Chowk, Gurgaon Haryana - 122001	0124-2571700-19 0124-2571760, 0124-2571762(Fax) isjha@powergridindia.com prpati@powergridindia.com
3	CMD TSTRANSCO Vidyut Soudha, Khairatabad Hyderabad 500 082	040 23317657(T) 040 23320565(F) cmd_transco@telangana.gov.in
4	CEO RECTPCL Core-4, Scope Complex 7, Lodhi Road, New Delhi – 110 003	011-47964796 (4 Lines) 011-47964747(F)
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10	Chief Engineer (Transmission) Bihar State Electricity Board Vidyut Bhawan, Baily Road, Patna Bihar-800021	0612-2504655(F) 0612-2504937 Jp_bseb@yahoo.co.in
11	Chief Engineer (TS) Punjab State Transmission Corporation Ltd., The Mall, Mall road, Sheran Wala Gate, Patiala, Punjab– 147 001	01752303676 (T) 0175-2301536 (F) ce-tl@pstcl.org cmd@pstcl.org

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14	Managing Director Techno Electric & Engineering Co. Ltd 508-509. Skipper Corner, 88 Nehru Place New Delhi-110019	011-30542900 (T) 011-26446098 (F) pp.gupta @techno.co.in shekhar.vasudev@techno.co.in omkar.gupta@techno.co.in
15	CEO (Transmission) Kudgi Transmission Limited #38, Cubbon Road, Bangalore - 560 001,	80-2502-0119 (T) 80-2559-6397 (F) priyanka.bajpai@Intidpl.com
16	Director Dgen Transmission Company Limited (Inabensa Bharat Pvt. Ltd.) Flat No. 305,306 9 th Floor, Eros Corporate Tower Nehru Place, New Delhi – 110019.	011-41608168 (T) 011-46542484 (F) sachin.gupta@abengoa.com
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18	Sh Kausik Chowdhuri Vice President (PPP Projects) Kalpataru Power Transmission Ltd. 7 th Floor, Kalpataru Synergy Opposite Grand Hyatt, vakola, santa Cruz(E) Mumbai 400005	Tele-02230642156 Fax-02230645000 Mob. 09833945444 kchowdhuri@kalpatarupower.com